

Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application.

1. (canceled)
2. (currently amended) An apparatus for maintaining an optical gap between a pellicle and a reticle in a photolithography system comprising:
 - a frame defining first and second opposing surfaces;
 - a reticle mated to said first opposing surface using magnetic coupling; and
 - a pellicle mated to said second opposing surface using magnetic coupling,wherein said first opposing surface includes a high magnetic permeability coating and said reticle includes a high Hc coating having a thickness of less than 1 micron.
3. (currently amended) An apparatus for maintaining an optical gap between a pellicle and a reticle in a photolithography system comprising:
 - a frame defining first and second opposing surfaces;
 - a reticle mated to said first opposing surface using magnetic coupling; and
 - a pellicle mated to said second opposing surface using magnetic coupling,wherein said second opposing surface includes a high magnetic permeability coating and said pellicle includes a high Hc coating having a thickness of less than 1 micron.
4. (original) The apparatus of claim 3, wherein said high magnetic permeability coating includes any one of soft iron, nickel-iron, and a nickel-iron alloy.
5. (original) The apparatus of claim 3, wherein said high magnetic permeability coating carries a magnetic flux of at least 1,000 gauss and maintains a permeability of at least 100 at 1,000 gauss.

6. (original) The apparatus of claim 4, wherein said reticle includes a high Hc coating outside a pattern area for coupling to said high magnetic permeability coating of said first opposing surface of said frame.

7. (currently amended) An apparatus for maintaining an optical gap between a pellicle and a reticle in a photolithography system comprising:

a frame defining first and second opposing surfaces;

a reticle mated to said first opposing surface using magnetic coupling; and

a pellicle mated to said second opposing surface using magnetic coupling,

wherein said pellicle includes a high Hc coating outside a pattern area for coupling to said high magnetic permeability coating of said first opposing surface of said frame, and

wherein the high Hc coating has a thickness of less than 1 micron.

8. (previously presented) The apparatus of claim 7, wherein said high Hc coating includes any one of a ceramic ferrite, barium ferrite, a cobalt alloy, a nickel alloy, a vanadium alloy, a samarium cobalt alloy, samarium cobalt, an aluminum-nickel alloy, a nickel-iron alloy, a neodymium-iron-boron alloys and a vanadium-cobalt alloy.

9. (currently amended) ~~The apparatus of claim 8,~~ An apparatus for maintaining an optical gap between a pellicle and a reticle in a photolithography system comprising:

a frame defining first and second opposing surfaces;

a reticle mated to said first opposing surface using magnetic coupling; and

a pellicle mated to said second opposing surface using magnetic coupling,

wherein said first opposing surface includes a high magnetic permeability coating, and

wherein said high Hc coating includes a high spatial frequency pattern of alternating field directions.

10. (original) The apparatus of claim 8, wherein said high Hc has a value of at least 1,000 oersteds.

11. (original) The apparatus of claim 8, wherein said Hc has a value of at least 5,000 oersteds.
12. (currently amended) An apparatus for maintaining an optical gap between a pellicle and a reticle in a photolithography system comprising:
 - a frame defining first and second opposing surfaces;
 - a reticle mated to said first opposing surface using magnetic coupling; and
 - a pellicle mated to said second opposing surface using magnetic coupling,wherein said first opposing surface includes a high Hc coating, and wherein the high Hc coating has a thickness of less than 1 micron.
13. (original) The apparatus of claim 12, wherein said reticle includes a high magnetic permeability coating outside a pattern area for coupling to said high Hc coating of said first opposing surface of said frame.
14. (original) The apparatus of claim 12, wherein said high Hc coating is patterned into strips.
15. (currently amended) An apparatus for maintaining an optical gap between a pellicle and a reticle in a photolithography system comprising:
 - a frame defining first and second opposing surfaces;
 - a reticle mated to said first opposing surface using magnetic coupling; and
 - a pellicle mated to said second opposing surface using magnetic coupling,wherein said second opposing surface includes a high Hc coating, and wherein the high Hc coating has a thickness of less than 1 micron.
16. (original) The apparatus of claim 15, wherein said pellicle includes a high magnetic permeability coating outside a pattern area for coupling to said high Hc coating of said first opposing surface of said frame.
17. (canceled)
18. (canceled)

19. (currently amended) An apparatus for maintaining an optical gap between a pellicle and a reticle in a photolithography system comprising:

a frame;

a reticle mated to a first side of said frame using magnetic coupling; and

a pellicle mated to a second side of said frame using magnetic coupling,

wherein said first side includes a high magnetic permeability coating, and

wherein said reticle includes a high Hc coating with a thickness of less than 1 micron.

20. (currently amended) An apparatus for maintaining an optical gap between a pellicle and a reticle in a photolithography system comprising:

a frame;

a reticle mated to a first side of said using magnetic coupling; and

a pellicle mated to a second side of said frame using magnetic coupling,

wherein said second side includes a high magnetic permeability coating, and

wherein said pellicle includes a high Hc coating with a thickness of less than 1 micron.

21. (original) The apparatus of claim 20, wherein said high magnetic permeability coating includes any one of soft iron, nickel-iron, and a nickel-iron alloy.

22. (original) The apparatus of claim 20, wherein said high magnetic permeability coating carries a magnetic flux of at least 1,000 gauss and maintains a permeability of at least 100 at 1,000 gauss.

23. (original) The apparatus of claim 22, wherein said reticle includes a high Hc coating outside a pattern area for coupling to said high magnetic permeability coating of said first side of said frame.

24. (currently amended) An apparatus for maintaining an optical gap between a pellicle and a reticle in a photolithography system comprising:

a frame;

a reticle mated to a first side of said using magnetic coupling; and
a pellicle mated to a second side of said frame using magnetic coupling,
wherein said pellicle includes a high Hc coating outside a pattern area for
coupling to said high magnetic permeability coating of said first side of said frame, and
wherein the high Hc coating has a thickness of less than 1 micron.

25. (previously presented) The apparatus of claim 24, wherein said high Hc coating includes any one of a ceramic ferrite, barium ferrite, a cobalt alloy, a nickel alloy, a vanadium alloy, a samarium cobalt alloy, samarium cobalt, an aluminum-nickel alloy, a nickel-iron alloy, a neodymium-iron-boron alloys and a vanadium-cobalt alloy.

26. (currently amended) ~~The apparatus of claim 25,~~ An apparatus for maintaining an optical gap between a pellicle and a reticle in a photolithography system comprising:
a frame;
a reticle mated to a first side of said using magnetic coupling; and
a pellicle mated to a second side of said frame using magnetic coupling,
wherein said pellicle includes a high Hc coating outside a pattern area for
coupling to said high magnetic permeability coating of said first side of said frame, and
wherein said high Hc coating includes a high spatial frequency pattern of alternating field directions.

27. (original) The apparatus of claim 25, wherein said high Hc has a value of at least 1,000 oersteds.

28. The apparatus of claim 25, wherein said Hc has a value of at least 5,000 oersteds.

29. (currently amended) An apparatus for maintaining an optical gap between a pellicle and a reticle in a photolithography system comprising:
a frame;
a reticle mated to a first side of said using magnetic coupling; and
a pellicle mated to a second side of said frame using magnetic coupling,
wherein said first side includes a high Hc coating, and
wherein the high Hc coating has a thickness of less than 1 micron.

30. (original) The apparatus of claim 29, wherein said reticle includes a high magnetic permeability coating outside a pattern area for coupling to said high Hc coating of said first side of said frame.
31. (original) The apparatus of claim 29, wherein said high Hc coating is patterned into strips.
32. (currently amended) An apparatus for maintaining an optical gap between a pellicle and a reticle in a photolithography system comprising:
a frame;
a reticle mated to a first side of said using magnetic coupling; and
a pellicle mated to a second side of said frame using magnetic coupling,
wherein said second side includes a high Hc coating, and
wherein the high Hc coating has a thickness of less than 1 micron.
33. (original) The apparatus of claim 32, wherein said pellicle includes a high magnetic permeability coating outside a pattern area for coupling to said high Hc coating of said first side of said frame.
34. (canceled)